

**REMARKS**

Claims 1 and 3-30 are pending in this application. Claims 8-10 are withdrawn from consideration. By this Amendment, claim 1 is amended to incorporate prior claim 2 therein, and claim 2 is canceled, in order to define the claimed process over the cited art.

No new matter is added by this Amendment. Support for the language added to claim 1 can be found in original claim 2.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration, namely because the amendments have been previously considered in prior claim 2; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

**I. Rejection Under 35 U.S.C. §103(a)**

Claims 1-7 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,512,168 ("Fetner") in view of U.S. Patent No. 5,496,741 ("Pawliszyn"). This rejection is respectfully traversed.

Passing heated or cooled liquid through a cartridge to control the temperature of the cartridge as recited in claim 1 provides several benefits as compared to controlling the temperature of the cartridge itself. For example, one advantage is that a change in temperature can take place relatively rapidly, both when heating the liquid is concerned and when cooling has to be carried out between two steps. See page 2, lines 27-29 of the

specification. Another advantage is that the heating means can be constructed with a relatively small volume. See page 2, lines 29-31 of the specification.

Applicants submit that Fetner and Pawliszyn, in combination or alone, do not teach or suggest that the temperature of the cartridge is raised or lowered by heating or cooling one or more of the liquids used in steps a) to d) before feeding to the cartridge as recited in claim 1. As admitted by the Patent Office, Fetner does not teach or suggest any information regarding raising or lowering the temperature of a cartridge. Furthermore, Pawliszyn does not teach or suggest this feature.

Pawliszyn teaches that the sorbent has *internal cooling means* such as liquid carbon dioxide. See Figure 2 of Pawliszyn. Further, a Peltier cooling device 16 is connected to cool the polymer. See column 2, lines 18-19 of Pawliszyn. Thus, no cooled liquid or heated liquid is used to control the temperature of the cartridge as recited in claim 1.

According to Pawliszyn, the sample may be heated to further increase the temperature differential between the sample and the sorbent. Heating of the sample enhances the volatility of the analytes in the headspace such that more analytes reach the analytical gas chromatographic column. This is very different from step b) recited in claim 1.

Further, Pawliszyn teaches that analytes are released from the sample by thermal desorption and reach the sorbent/cartridge in the vapor phase. Pawliszyn specifically teaches that if the sample is heated, the sorbent must be simultaneously cooled to prevent the sorbent from being heated. See column 6, lines 17-23 of Pawliszyn. Thus, according to Pawliszyn, if the liquid (sample) is being heated, the sorbent/cartridge, correlating to the sorbent must be cooled. This is the exact opposite of the limitation in claim 1 reciting controlling the temperature of the cartridge by passing the heated or cooled liquid through the cartridge.

Based on Pawliszyn's teachings, one of ordinary skill in the art would not look to this teaching to modify the liquid chromatography taught by Fetner to arrive at solid phase

extraction process including controlling the temperature of the cartridge by heating or cooling one or more of the liquids used in the recited steps before feeding the liquid into the cartridge as recited in claim 1.

Accordingly, Applicants submit that even if the teachings of Fetner and Pawliszyn were combined as alleged by the Patent Office, the solid phase extraction process recited in claim 1 would not have been achieved.

For the foregoing reasons, Applicants submit that claims 1 and 3-7 are patentable over Fetner and Pawliszyn, taken alone or in combination. Reconsideration and withdrawal of the rejection are thus respectfully requested.

## **II. Rejoinder**

Applicants respectfully submit that all withdrawn claims, and at least claims 8-10, should be rejoined with elected claims 1 and 3-7. In particular, claims 8-10 are drawn to a solid phase extraction apparatus, while claims 1 and 3-7 are drawn to a solid phase extraction process. A product and a process that are related to each other will be considered to have unity of invention. 37 C.F.R. §1.475(b)(1-5).

Thus, Applicants respectfully request that at the very least, non-elected claims 8-10 be rejoined with elected claims 1 and 3-7.

## **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 3-30 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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